

TAIG

February 1984

Twin Cities ATARI® Interest Group

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Vice President: Dale Panton
Treasurer: Jim Dahlberg

PRESIDENTIAL CONFERENCE

Well, I hope you like the new meeting place. At least the people who showed up at the last meeting seem to enjoy it a lot better than the Odd Fellows Lodge. Our next meeting is also at the St. Louis Park Rec Center. The address is 5005 W. 36th ST. It is just a few blocks east of Hwy. 100 near the St. Louis Park Byerly's complex.

Our new discussion groups seemed to go fairly well, so we are going to do it again. We do have some new ones being formed. They are Advanced BASIC Programming (Mike Davis will be starting that one up. In his place in the Music group will be Ellen Moore.), and a FORTH group (led by Bob Floyd, the author of that classic; BLAZING PADDLES. Hows that for a plug, Bob?). So, by my count we have these groups:

Beginning computing

Advanced BASIC

Music

Telecommunications

FORTH

COMPUTE programs

Graphics

If there are others that you would like to start, let us know. If I forgot anyone's group, I am sorry. These discussion groups start at 6:00 PM on the night of our meetings. There was some concern over the fact that some people will want to attend more than one. The only solution to this would be to hold these meetings on another night. If some of the groups would like to do this, let us know. It would also be nice if someone from each of the groups would write an article for the newsletter so that others may share in what was discussed at the meeting. These are just a few of the things we can do to make our group better.

I would like to thank Ralph Jenson for taking over as editor of our newsletter. Todd needed a break. Maybe it would be a good idea if we could get several people

editing the newsletter so that we don't burn anyone out. If you are interested in helping, please let us know.

I guess by now you have noticed that I am putting in a lot of pleas for help in our group. If you haven't, then HEAR THIS: This group is only going to go as far as the membership is willing to go. (Those willing to go all the way call Phil at 874-8700. -ed.) If there is no desire to improve the benefits then there will be no improvements. Now I don't think anyone wants to remain static. Let us make this group grow!!!

We will be electing new officers in a few months. Now is the time for some careful thought as to whether you would like to hold some function in our group. I personally would like to see a lot of new people doing things for the group. I think it would really be a benefit for the group if we did have new faces; mine is pretty ugly (no wonder ATARI didn't come and take videos of our group for distribution to others). Don't pass up this opportunity of a lifetime. Think of the leadership experience

you could gain if you run the group. Maybe you didn't realize that I am really a very shy person. (If you believe that, I have some land in Florida for sale.)

This month's meeting is the one where we hold our drawing for prizes. The entry forms were on the questionnaires you were supposed to fill out and return to us. You can still enter the drawing by filling out that thing and giving it to us before the meeting. In case you didn't know, the questionnaires were printed in the January '84 newsletter. Go dig it out, fill it in, and turn it in.

If you write an article for our newsletter, it can be submitted in several different ways. 1> Put it on a disk or cassette in a straight ASCII file (ATARI WRITER or TEXT WIZARD OK too -ed.). Turn it in at the meeting or leave it at Wizard's Work (I would like to thank the people at Wizard's Work for allowing us to drop off our articles there. -ed.) 2> You can upload it to a mainframe. Call 541-2175. The username is TAIG. Instructions will be printed on the screen. 3> Type it up and turn in the paper at the meeting. There is a reward for writing articles. For each newsletter in which you are published, you will receive one FREE DISKETTE containing our programs for the month. The same prize applies to people who write a program for our public domain library. I don't know about you, but I am always running out of disks.

That is all I have to say this month. I hope to see all of you at the next meeting.

BLINKER:ANOTHER LOOK

by Don Robinson

I spent some time working with a routine from an article in the August TAIG Newsletter titled "BLINKER:A Blinking Routine by Todd Burkey." It was supposed to make everything in inverse video blink (including the cursor). It did exactly that: but I had one small problem. When I used it in a program and then turned it off with POKE 553,0, my computer locked up (and I mean locked up).

Apparently there is some other housekeeping to be done as one exits the routine. In addition to the above, I found it necessary to POKE 538,0 (keeps the computer going) and POKE 755,2 (turns the cursor back on). For those of you who may not still have the article, the main part follows (with appropriate modifications.)

"To use the routine, just include it somewhere in the initialization portion of your program. You can turn the blinking off with POKE 553,0:POKE 538,0:POKE 755,2 and on again with A=USR(256). To change the blink speed, just POKE location 284 with a number between 1 and 255 (fast to slow). Try POKEing locations 277 and 279 with different numbers to get special flashing effects."

Program Listing:

```
9022 FOR I=256 TO 256+32:READ
M:POKE I,M:NEXT I:A=USR(256)
9023 DATA
104,169,17,141,40,2,169,1,141,41,2,
169,
30,141,26,2,96,173,243,2,41,23,73,2
,141,243,2,169,
30,141,26,2,96
```

A couple of final notes: There is a similar article in "Mapping

the Atari" by Ian Chadwick found with his description of location 755. Also I had a great deal of help in chasing the source of my trouble from an article in the November ANALOG titled "A Disassembler in Atari Basic" by Maurice Elliot. This is a neat utility that converts those machine language "DATA" statements to readable Assembly language.

ADVANCED MUSICSYSTEM VER. 2

by Mike Davis

Well it's finally here: Version 2, which I talked about last August and September, has been released by Lee Actor. Its improvements over version 1 are substantial. Here is a list of improvements:

1. 100% machine language (no more BASIC.)
2. Music file capacity is now 8200+ notes instead of 3400+ notes.
3. Variable envelope release. There are no more clicks. (No /D or /DD.)
4. Tempo change control within a music file.
5. Much faster editing. (Due to being a machine language program.)
6. 64th notes can be directly entered. (Uses "Z".)
7. Data files are smaller.
8. Tempo can be changed with joystick while the song is playing. (Not with paddles as in version 1.)
9. All bad keys are masked out.
10. Out-of-memory test actually works.
11. Voices may end independently.
12. To halt a song, just use System Reset.
13. System Reset is functionally non-destructive.
14. Play has a short delay at the beginning and end of a song.
15. The color graphics of the notes do not tear as in version 1.
16. Dn:m.n can be as large as 99 instead of 64.
17. Can play version 1 music files. Only the ties are lost.

This list is not totally complete, but these are the major highlights. I should mention that a 16K cassette version is also available which version 1 didn't even offer. The price for this program is \$25.00 for either cassette or disk. I shall be taking one more order at our meeting on February 26.

At this time, there is not an Auto-play function as in version 1. One will be available in the future.

POLESITTER ONCE REMOVED

Coming out of turn ten onto the main straight away and accelerating away from the pack, the Camaro GT1 race car pulls to the right to avoid a slow car on the track. The trackside announcer calls out the... .WAIT-A-MINUTE!!! What is a trackside announcer doing in an Atari computer game???

This is your correspondent Bernie King-Smith with my first installment in a series of articles on a new application of computer programming. This hopefully will urge my fellow programmers to write similar articles on unique or non-traditional programming applications.

This past year, an ATARI computer provided provisional timing and scoring results for use at all roadrace events at Brainerd International Raceway. This article will explain how the need for computerization was seen and will describe a series of programs developed for the track.

For the past seven years I have been working at the timing and scoring area at the track and have witnessed the problems of plotting data and keeping track of cars on

the course using a pencil and paper. If a human error occurred, the results would have to be recalculated from the point of error. This generally led to big delays in reporting the results of a race.

This program uses the concept of real time programming rather than simply entering data and looking at the final results. The length of running the program is determined by the race on the track, not by the amount of data entered (as in a batch type program). The program keeps running until the race is over (this is similar to game programming except that the program is not terminated by losing all of the players).

Jerry Hanson in the Camaro GT1 is being closely pursued by Paul Newman in his Datsun 280Z as they come up on the back of the pack. Next time around, the two leaders have moved up and passed seven cars. Here is the human problem: How to keep track of how many laps the cars have finished and in what order they finished that lap? The key to the problem is to use two sets of counters: the first to count of how many laps each car has finished and the second; how many cars have completed each lap.

Using this information a car number can be plotted on a grid consisting of laps vs. position. As each car passes the timing line (between the last turn, number 10, and the start-finish line) the car number is entered. First, the computer checks to see how many laps the car has completed and adds one. Using that number, it checks to see how many cars have finished that lap and adds one. This calculates the Nth car to complete that lap. Using these two numbers, the computer has calculated the position in which the car has completed the current lap.

All this information is plotted on an internal array consisting of the coordinates "lap vs position". This is identical to the grid used when calculating the race results by hand. The computer takes away the risk of calculating a wrong position (such as giving a car two times around on the same lap).

Now that I have you confused, let me briefly explain the situation. This program uses an internal array to plot where a car stands in a race. The array uses the coordinates "lap" and "position" to locate the correct point for the car's current position. The coordinates are calculated using counters for the number of laps a car has completed and the number of cars that completed that lap. See, that wasn't very hard!!!

Dave Erickson in his formula V racer flies past the timing line in car number 66. The operator enters a 67 OOOOPS!!!! AAARGH, data error. Well 'til next month this is your north woods reporter saving file on disk.

Next month: How the program checks for valid data and other real time programming problems.

ANALOG INFORMATION

by Bill and Kathy Sommers

For those of you not familiar with ANALOG, it is a magazine dedicated to the ATARI computer. A year ago the club took advantage of an offer from ANALOG and obtained a free one year disk subscription for getting more than 10 club members to subscribe (at a reduced rate). At the time, the magazine was published bimonthly, but it has recently changed to monthly publication.

Club members who originally subscribed to ANALOG's disk subscription deal and other members who subscribed to ANALOG have been able to purchase a copy of the disk at monthly TAIG meetings for \$3.00 per disk. We asked those people to bring in their magazine subscription label the first time they purchased a disk as proof of subscription.

The club's disk subscription expired as of January and since ANALOG is not offering the same deal as last year, there was a question as to whether or not the club should renew. At the January meeting, subscribers were questioned about their plans to renew, and 100% of those questioned did plan to do so. Due to this strong club membership support, the club has renewed the disk subscription. ANALOG is not giving us a break on the disk subscription but will give club members a slight discount on the annual rate. The normal rate is now 12 issues for \$28.00 but club members can get it for \$24.00 by sending a subscription notice with a copy of the front page of our newsletter showing your mailing label and the TAIG return address to:

ANALOG Magazine Corp.
565 Main St.
Cherry Valley, MA 01611

Note: This discount is NOT available at the toll-free number and the address is different than that on the subscription postcards.

Due to the increased price for the club subscription, we will be increasing the price of a disk to \$4.00 starting at the February meeting. All disks sold at that meeting and later will be at the new price.

Those of you who got in on the original club offer should not wait for a renewal notice because you probably won't get one. Apparently

there was a mix up at the ANALOG subscription office and those people may not get renewal notices or, if they do, the notice will be late.

For anyone considering a subscription, the club library has all of last year's magazines to look at or check out.

CHILDREN WILL PLAY

by Phil Seifert

They had to drag me up kicking and screaming to write this article. I was in the process of collecting my reward after rescuing the beautiful princess from the dragon. I hope she will wait for me.

There really isn't much to report this month as not very many new pieces of software were released for our ATARIs. However, some old titles announced ages ago were finally released. JOUST, MS. PACMAN and POLE POSITION were all released by ATARI. They are all cartridges so everyone can enjoy them. I would recommend getting all three for your library of classic games, and also because they are very good renditions of the arcade hits.

The only game that I can think of that is being released this month is called BOULDER DASH by First Star Software. This program follows hot on the heels of their last releases, FLIP n' FLOP and BRISTLES. These programs seem to boast high quality graphics and good sound. In case you didn't know, First Star is the company formed by Fernando Herarra, first winner of ATARI APX's Star Award for submitting MY FIRST ALPHABET. It gave him \$25,000, with which he formed the company. His second program is called ASTRO CHASE.

I think we can all expect a few good programs to come out. One I am looking forward to is SEVEN CITIES OF GOLD by Electronic Arts. This program was designed by those guys from the Ozark (they wrote M.U.L.E.). This is supposed to be a very good adventure program that tries to teach you a little something about life. MUSIC CONSTRUCTION SET isn't a game, but I am still looking for that one. I saw the Commodore version at the last CES and was impressed with what it could do. We can only hope the ATARI version performs as well.

Be sure to read the article by Raoul Duke this month. You can see what kind of madness M.U.L.E. stirs up. I think it would be nice if we could start our own weekly games. I know those guys down there, and I don't think they are as good at playing M.U.L.E. as our people up here. I propose we all practice up and select our champion. Then he or she will go forth and do battle with those people in Houston.

DON'T READ THIS SECTION UNTIL YOU READ THE RAOUL DUKE ARTICLE. THEN COME BACK.

This reason for this is I want to tell you who the winners were. It was the ARAB and the JEW over the young punks. And we have been officially challenged by the W.A.C.O. group.

If anyone is interested, especially the kids playing ZORK II, I think we can have a cheat discussion group at our meeting. They can get together and trade tips on how to cheat on their various games. The only restriction is that they must be in the opposite corner from where I am so I don't overhear the answers. If you are interested in such a group, let me know. But don't expect me to participate as I do not cheat!!!

WHEN ARE WE GOING TO HAVE

ANOTHER GAME FAIR????? If anyone is interested in organizing one, please talk to me.

That's all folks.

FORTH NOTES #1

by Bob Floyd

Reprinted from S.P.A.C.E. Newsletter

This is the first in a series of articles on the FORTH language. Maybe this series can reduce the monthly pleas from our leaders for articles. If not, I hope it at least introduces SPACE members to the "basics" (a bad pun) of FORTH. Maybe then we can form our own mini-group. The series will be slanted towards valFORTH, a version of FORTH published by valPAR Int'l, since this is the only FORTH with which I have worked.

Let me first explain why I like FORTH. The main reason is that FORTH is an excellent compromise between Basic and Assembly Language. Basic is easy to use, but slow to execute; whereas Assembly is hard to use, but very fast. In other words, FORTH is much easier to use than Assembly, and executes much faster than Basic. Three reasons for FORTH's high speed are:

- (1) Most FORTH math is Integer-based (Basic uses floating point.).
- (2) The code is structured in a more usable form.
- (3) FORTH is "compiled".

This is not a true compilation, but it does improve speed considerably.

The first concepts of FORTH to

understand are RPN and the stack. RPN, as many of you know, stands for Reverse Polish Notation. Hewlett-Packard uses RPN in their line of scientific calculators. The stack is an area of memory where numbers are temporarily stored waiting to be used. To add two numbers together using RPN, first put both numbers onto the stack, and THEN add them together. See the example of RPN below:

YOU TYPE	STACK (TOS AT RIGHT)
3 <CR>	(3)
4 <CR>	(3 4)
+ <CR>	(7)
	or more simply
3 4 + <CR>	(7)

Note that TOS stands for "Top Of Stack". The last number put onto the stack is at TOS. All other numbers are "below" it. The stack is essentially "last-in, first-out". Note above that numbers are placed on the stack simply by typing them, followed by a carriage return. (The example illustrates the interactive mode where commands are entered on the keyboard as you go, followed by a carriage return. In an actual program, the carriage returns are not used.)

Next time I'll cover the FORTH concept of "words", and the most common words, + - * and three forms of /. Later, I'll talk about many other words, using the text editor, disk access, output to printers, joystick inputs, and player-missile graphics (PMG is amazingly easy and FAST). Be sure to let me know if there are areas you would especially like me to cover.

Incidentally, two good books on FORTH are:

Brodie, Leo Starting FORTH. Hermosa Beach, CA: FORTH, Inc., 1981.

Scanlon, Leo J. FORTH PROGRAMMING. Indianaopolis, IN: Howard W. James & Co., 1982.

Personally, I much prefer the Scanlon book.

YOU KNOW YOU HAVE BEEN AROUND COMPUTERS TOO LONG WHEN:

You call up Shakey's and order a double-sided, double-density pizza to go.

You start making reservations to eat at Percoms.

Just
think...
IF YOU
had
written
something
for this
newsletter,
it could
have filled
this
space!

SIGNING OFF...FROM THE EX EDITOR

I would like to take this opportunity to welcome Ralph Jenson to his new position as the editor of the TAIG newsletter. I will still try to write a few articles each month, but what with my normal job and my SOFT UNLIMITED work (my abnormal job?), I couldn't find the time to effectively organize a truly comprehensive newsletter and stay sane. Now Ralph can go insane for a while.

Please ignore Phil's comment at the last meeting about my going away for several months. That was news to me. Oh yeah, I almost forgot. Now you can dump Ralph with all of those articles you have been holding back for the last year or two. I think everyone in the club should be able to take the time out of an evening to write at least one article per year. You have to give a little in order to make a club like ours work. Especially those of you who I consider in the hacker league: Early on you must of learned something by attending meetings or reading articles otherwise you wouldn't still be attending/reading TAIG. I know that I would like to see more articles on music/sound, graphics, languages, and some good solid game reviews. How about you?

HARDWARE AND SOFTWARE NOTES

By Todd Burkey

Not much new in the area of hardware and software, since the 1450 still isn't out and our local ATARI distributors haven't distributed much since they sued ATARI last year. I do hear from California that the 1450 is on display in stores, but that none are for sale yet. And the 800XL computer is now out in the cities (at Target first, of course). It

retails for \$349, but I have seen it as low as \$299. I got several in to check out how I can get some of my software to work on the XL model, so if you are in desperate need for an 800XL, let me know. Quite a bit of software doesn't run with the XL operating system (I even found out that SOFTBASE does strange things...and I didn't use any of the things that supposedly conflict with the XL OS.) However, ATARI does offer a disk with two autoboot programs on it that allow you to run most of the software (even SOFTBASE) on the XL. What apparently is on the disks are copies of the old ATARI 800 OS that load into the upper 10K of RAM on the XL and bank select that memory into use. I haven't had time to figure out exactly what the differences in the two programs are, but one will run most of the programs that the XL won't, and the other will run most of the programs that the first program won't run...to paraphrase ATARI's note that comes with the 800XL.

Confused? Don't worry, it can't be as bad as what the C64 people have to deal with. I had this strange idea of converting my software over to the C64, so I obtained a 64 with drive and an assembly package. The C64 had excellent documentation for the beginner, but it only took you up to a point and then stopped. I know now why there are so many articles in COMPUTE! covering topics that are so simple on the ATARI. They aren't easy on the C64. Maybe I missed something, but I detected hardly any semblance of a true operating system in the computer and the disk operating system paled even in comparison to the ATARI DOS 2.0, which leaves a lot to be desired. I was impressed with the sound, however, but the music capabilities fell short of my cheapie keyboard synthesizer from Radio Shack. Now if they build something for the C64 along the lines of the Alpha Centauri Keyboard (I saw it on an APPLE II for around \$3000) for several

hundred dollars, then I might be tempted.

Back to ATARI. The Indus came just in time for Christmas and RANA finally got most of my order in (after Christmas, of course). I am sure that everyone knows that prices on the 810 drives, 800 computers, and select items of software dropped drastically in recent months as stores in the cities cleared out their inventory of ATARI equipment (see my article on 1983: The Year in Retrospect, if you can stand the frustration). Trax has reportedly folded. At first I thought it was Trak that had folded, since both companies advertized drives for the ATARI (you may remember TRAX ads...they showed an exact duplicate of an 810 with a TRAX label). I got a unique chance to see the insides of both the Trak and Indus drives last month after Spartan Softwares' office fire. I offered to help clean up and found myself having to take each drive apart down to removing the heads and scrubbing every board with a toothbrush under a water faucet (picture what the inside of your drive would look like if you soaked it overnight in a can of black paint.) I am very impressed with the quality of the Indus boards and construction over the TRAK drives, although I may be somewhat biased by the fact that the TRAK used nuts and bolts (some of which were stripped) to secure the boards together. Also, the Indus was appropriately colored, so the only evidence of the fire afterwards was the scarred 'smoked' glass front cover (I will resist making any jokes at this time).

The 8088 upgrade for the ATR8000 dropped in price, so I finally got it. See my article on the ATR8000 for more info. The 1027 printer got a good review in the December issue of consumer reports. In fact, the whole 600XL/ATARIWRITER/1027 system was picked by the report as better than the C64, ADAM, and TRS80 Color

computer word processing packages.

- What was really interesting was that the 16K ATARI beat the 64K and 84K machines (the major thing that gave ATARI the edge was ATARIWRITER, of course).

Now is the time to think of protecting yourself from equipment downtime if you are a dedicated 800 owner. I know a lot of people that have purchased their second and even third 800's lately as a source for spare parts in the future. Why do this? Primarily because the 800's will become very scarce over the next few years and if I am right, repair centers will start charging more to fix the units because 1) they will have to pay more for replacement parts and 2) they will take longer to fix them since they won't be as familiar with the hardware. I purchased several complete board sets for the 800 to have around if anyone gets really desperate, but if you find a good deal on an 800, get it.

Finally, on the software side of things, I found several new games that I really like. Best was BOULDER DASH from First Star. This is one of those arcade style games where you have to think as well as react to the situation. Basically, you move a little man around on the screen trying to get enough treasure to go on to the next level. This is done in the form of Dig-Dug with a twist in that you are faced with a scrolling screen much larger than the viewing window. The action is fast, the monsters are strange, the music is good, and each level is like a new game. I think there are 16 levels, but I have only reached the third so far. Another game I liked was TRAINS by Spinaker. This game contained excellent graphics and sound and is on the level of MULE in terms of combining entertaining graphics and user interaction with education in the area of economics. In TRAINS, you must maneuver a train around a track buying and selling ore, wood, oil, and other

items in order to buy coal to keep the train going. If you keep the train going long enough, a track will be built leading off of the screen to let you go on to the next level. There are 8 levels or scenarios to choose from, so the game can be as challenging as you feel up to.

I should also note that there is a new version of SOFTBASE and CARTDISK out. They are free upgrades to registered owners. SOFTBASE 1.1 has a bug corrected that was caused by the serial number protection scheme. Don't worry, your databases won't be affected by the bug or the upgrade...the bug was in the print routine and was special case enough that most people would never run into it. 1.1 also has a hidden feature added that will make printing even easier than before. CARTDISK has a new DOS file builder (see the related article in this issue).

1983: THE YEAR IN RETROSPECT

By Todd Burkey

What a year. Not necessarily good for ATARI, losing so many millions....I think everyone has heard about it already so I won't dwell on it here. It was a year of almosts and sort ofs. The 1400 XL almost came out but now never will. The 1450 XLD almost came out and might this year. The 1200 XL came out and everybody wishes it hadn't. ATARI's CP/M unit was announced, but if it came out nobody has owned up to owning one yet (thank God for the ATR8000 coming down in price and doing the job). The 1050 came out (yawn). Finally, the 600XL and 800XL came out, but not in any quantity locally due to a lawsuit filed against ATARI by our local distributor (probably due to the fact that so much was delayed and/or cancelled by ATARI). We can finally buy slim line drives for

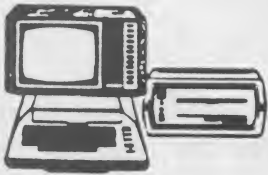
our ATARI computers now that the RANA, TraK, Indus, and new PERCOMS are on the market and at a decent price.

Speaking of price, the other memorable aspect of 1983 was the price change on ATARI hardware. In part due to the price war with TI and Commodore, and partly because a lot of stores dumped ATARI this last year, the local prices on ATARI hardware and software reached ridiculous lows. In January of 1983, a really good price on an ATARI 800 with 48K was \$539 (I thought that was good, because a year earlier I paid \$950 for the same thing and I was getting a good deal). A disk drive was \$429 on sale and the 825 printer was only \$525 on sale. The communicator kit was only \$325! By the end of 1983, if you were a good shopper and in the right place at the right time, you could have paid \$50 for an 800 with 48K (after rebate, although I did hear that someone actually got \$50 net out of buying an 800 for \$49.95!). Or you could have bought an 810 for \$100 or a 1025 printer for \$129 or a communicator kit for \$150. It was a good time to get your backup system, I guess.

Even software fared little better in the price drops. As Schaak and Penny's got out of the market, games and educational packages were dumped in the cities at way below dealer cost...I saw some games and utilities selling for less than a tenth of retail!

Hopefully with TI out of the market, and Commodore and Coleco having problems now, the prices will settle down and the software developers can get back to writing programs for the ATARI, as opposed to waiting to see whether ATARI would fold. I will still have my 800 by the end of 1984, so it will be interesting to see how this year turns out.

GREEN LAKE COMPUTER CAMP



Featuring the
ATARI 800XL COMPUTER



CAMP DIRECTOR:

George Toops
Computer Coordinator
New London-Spicer H.S.

INSTRUCTOR:

Jan Kieber
Computer Instructor
Shakopee High School

BOTH MEMBERS OF TAIG

Utilizing the luxurious recreational facilities of Green Lake Bible Camp in beautiful Spicer, Mn. Canoeing, swimming, hiking, volleyball, basketball and softball are just a few of the outdoor activities to go along with a great variety of computer opportunities.

Course Offerings:

Beginning BASIC
Files
Sort Routines
Player/Missile Graphics
Display Lists
GTIA Graphics
Scrolling
Atari Assembler
Applications
AND MORE!!

CAMP TUITION-\$175.00 per session- Includes board and room, instruction, insurance, camp t-shirt and diskette.

LOCATION-Green Lake Bible Camp in Spicer, Mn. 10 miles north of Willmar on Hwy. 23. 100 miles west of Minneapolis.

LENGTH OF SESSION-Each session begins at 8:00p.m. on Sunday and ends at 1:00p.m. on Friday. Registration begins at 6:00p.m. on Sunday and is limited. Applicants will be accepted on a first come, first serve basis.

2 SESSIONS:

August 12-17
August 19-24

1 Computer for
every 2 campers

CAMP ADDRESS:

GREEN LAKE COMPUTER CAMP
Box 486
Spicer, Mn. 56288
612-796-5221

GREEN LAKE COMPUTER CAMP APPLICATION

Tuition is \$175.00 for 1 week. Your deposit of \$50.00 must be mailed with this form. Balance due on arrival. Registration is limited. No refunds unless you are not accepted. Mail check/M.O. to: GREEN LAKE COMPUTER CAMP, Box 486, Spicer, Mn. 56288

Name _____ Age _____
Address _____ Phone _____
City _____ St. _____ Zip _____
School _____ T-Shirt Size _____
Please send me ___ additional brochures for my friends

The undersigned recognizes the nature of the camp program as described in the camp brochure and has no knowledge of any physical impairments that would be affected by or would affect the camper's participation in the program. I authorize the director to secure any emergency medical treatment deemed necessary. Recommended ages 10-18.

Parent or Guardian signature _____
Parents are invited to visit camps at all times

Check session you
will be attending:

() August 12-17
() August 19-24

Please give a brief description
of your computer experience and
topics that would interest you.

FEAR AND LOATHING AT THE MULE RACE
MATCH

By Raoul Duke

(Reprinted from THE WACO EXPRESS
Issue #8, at Phil's request.)

The limousine picked me up at the airport exactly 45 minutes before the starting buzzer. This could be a really big story! The event of the season! A grudge match between the young turks and the old pros. It's been the topic of conversation all week. The smiling mongoloid holding the door open for me looks like the type--I may pick up some tips on what the local betting line is. As we pull away from the curb, he looks in the rear view mirror and says, "In town for the big event, Sir?"

"Yeah, the race." I replied, searching my flight bag for something to kill the effects of reality. I don't deal well with reality.
"Race, Sir?"

"Yeah, the knockdown, dragout, grudge match mule race between some wise guy, his partner, Tuba, and a couple of hotshot kids. I think one of them is a Limey."

"You must mean the M.U.L.E. match between Weiss, Touma, and Martin, Jones."
"Yeah, the mule race!"

"But Sir, it's not a race. It's a computer game."

"COMPUTER GAME??!! What the hell do I know about computers!!!"

"I'm sure I wouldn't know, Sir." With this he closed the

glass partition and turned up his radio to drown out my screaming.

I'm doomed. I've already spent most of my advance expense money on the essentials to cover a race; Bushnell 21x Super Duper 40mm Zoom Binoculars, a white suit, an umbrella cap, Hawaiian shirt, a Sony Walkman complete with the entire Rolling Stones library, a new alligator suitcase full of Glen Fiddich Scotch and assorted other mind altering panacea and a dandy, monogrammed, monopod, portable racing seat I picked up at Neimans en route. I have exactly \$27.42 left from my expense check and I planned to expand this into a small fortune by picking a good mule or two to bet on, and now I find out this is a stupid computer game!! I know zip about computers except for that soulless piece of hyper-intelligent junk at the gas company that goes into a palsy when I step on the reply card with my golf shoes...

There's only one thing to do...get loaded, hide in a corner, pick up a few buzz words and fake it. After all, I get paid to be creative! I've done it before, actually more times than I can remember...I think. There it is again...they say the memory is the first to go. It has to be the medication. I'm too young to be senile.

"We are here, Sir; a voice comes from the ashtray. We pull into the driveway of a rather large house.

"Where?" By this time I really didn't care. I just had to get hold of some chocolate chip cookies...Quick!

"The Kerners, the M.U.L.E. game," the ashtray replied. About this time a roar came from the house, across the front lawn, in

through the wing vent and echoed around the back seat...

"MULEE! MULEE! MULEE!"

I must be at the right place at the right time for entirely the wrong story, I mused. Mused? Oh God! I've gone too far. I'm using words no one uses anymore. I struggled out of the car, dragging my monogrammed luggage, racing seat, flight bag, binocular case and assorted other goodies behind me. I tipped the driver my inflight magazine, a blue pill, and a yellow pill and turned to survey my doom...

Inside everyone was gathered around the TV screen. No one even noticed me coming in. "Great, the plan's working!" I think as I take mental note of where the food is. Carefully and quietly I set up my press box and encounter my first problem...Where do I stick my racing seat in a tile floor..Flower pots...Alright! Camouflage! Just like Nam!

Perched up here on my lofty seat offers a great view, just like being on the fifty at the Super Bowl!...I'm getting into this thing now!...No sweat!...All I have to do is listen carefully to what these idiots are saying and check out the action through my Bushnells...

"Collude, blah, blah...!"

"Christite, blah, blah...!"

"Faggits, baggits, bonzoids, flappers..."

Dear God, I'm on another planet! I can't understand a thing! What language is this or have I merely slipped over the edge of reality into Never Never Land?

The doctor said this could happen.

"MULEE! MULEE! MULEE!"

I've got to get something to eat! I hope the food is edible. I've never had alien food, even though I've had some Chinese that was pretty weird. Slipping down from my perch, trying not to get my Bushnells hung up on a small tree-like structure thereby garrotting myself.

In the kitchen, I run into this large guy, eyes glazed, muttering "What strategy!" and giggling to himself. As I edge toward the sandwich tray, there's a moan from the other room. The big guy grabs a beer and runs out of the room yelling "What happened!?" Great, the threat of having to communicate in some alien tongue has passed. Stuffing sandwiches, chips, beer and a six pack into whatever holding device I had, I slipped back to my post. Total depression...No chocolate chip cookies...I've got to get a hold on this...I've got to figure out what's going on.

The game is well underway by now, everyone's tense, wired, and getting a bit gamey...I wish they had a ceiling fan. I have no idea of who is what or which is what color...The older guys are paired up on the couch whispering to one another and fighting over a joystick (I believe it's called). The two young kids are in chairs colluding while not looking at each other. I get the impression that there has been so much colluding, it has confused the computer. The old guys seem to be ahead and, for some wierd reason, don't want to be. The kids are typically arrogant.

"WAMPUS! WAMPUS!, blah, blah!"

The old guys continue to whisper, and the sidelines are discussing what they would have done...I continue to look for some shred of sanity...My legs have gone to sleep or I've abused my body too much and am slowly metamorphosing into a pot plant!

The game is at a fevered pitch, as far as I can tell, and apparently getting close to an end. No one seems to know exactly whose ahead, but it seems they all want to be first (as opposed to the first part of the game when no one wanted to be in the lead). They keep saying something about a pirate ship. The Limey kid doesn't seem to be mouthing off as much to the adults as he was earlier. He may have seen the large gun collection downstairs and learned some respect for his elders. I've now totally lost the flow of the game and have started counting the leaves on the Ficos Benjamin tree. Wait a minute...The big guy with the glazed eyes just muttered something about "This is it! The big moment!! What we all have been waiting for!!! ALL RIGHT!!!" I think they must be nearing some sort of climax to this madness. OK, this is what they're paying me for. The score is...All of a sudden I feel something warm on my leg...Something warm and wet...I have a bad feeling this may have something to do with the sniffing sound I've been hearing for the past five minutes. I can't look. I don't want to look. I know...It's that stupid dog that apparently was much larger at one time because it looks like it lost a bunch of weight and it's skin is four sizes too big for what's left...It just buried my shoe...I've got to get out of here before this slobbering beast decides...My God! It just ate my luggage...Now it's burying the rest of my leg...I've got to get out of here!!! Wait. The big guy and the Arab are coming this way...They see me...I'm saved!!!

"So Jeff, what's this plant here?"

"What plant?"

"The one that looks like a little umbrella."

"Oh, I don't know...Some kind of cactus I think...Hell! Diane does the plant stuff, I just mow the lawn."

RAMROD OPERATING SYSTEM BOARD
FROM NEWELL INDUSTRIES
by Steve Crowley
(944-6399)

Those of you who attended the last meeting will remember the announcement I made. Newell Industries has agreed to offer members of TAIG a special one-time group order of the RAMROD operating system (O.S.) board at a substantial discount. Newell, incidentally, is the supplier of the Fastchip floating point O.S. ROM (which every ATARI should have). TAIG sponsored a group buy of the Fastchip when it was announced two years ago. We can attest that Newell Industries is a reputable company and offers quality products.

The RAMROD is basically a replacement O.S. board for ATARI 800 computers (fits in the front slot, replacing the board labeled "10K ROM"). It includes two 2732 EPROMS which contain the modified O.S., a socket for the Fastchip, and two sockets for RAMS or the Omnimon ROM. The modified operating system supports standard graphics calls from BASIC for modes 12-15 as well as faster keyboard response and auto repeat. The RAMS or Omnimon ROM are mapped into the unused 4K space at \$C000. Some programs (Visicalc!) can gain

valuable work space using the optional RAMS. In this configuration, the computer has 52K of contiguous RAM. Alternatively, Omnimon can be used as a resident machine language monitor. Originally marketed by CDY Consulting, Omnimon is provided as a standard part of the RAMROD. There are several different versions of Omnimon available directly from CDY Consulting, some with sophisticated debugging and special support capabilities (Ramdisk, Bit 3).

Newell markets the RAMROD for \$189.95 including Omnimon but without the Fastchip. The Fastchip sells separately for \$41.95. The special RAMROD price to TAIG members is \$125.00. If you also want the Fastchip, the package price is \$150.00. A minimum of four orders must be placed to receive this price.

I will be coordinating this special purchase. If you are interested or have any questions, call me (Steve Crowley) at 944-6399. The RAMROD and documentation will be available for perusal at the Feb. 26 meeting. The one-time order will be placed March 15. If you wish to take advantage of this special offer, I will need a check for the entire amount from you before this date.

Happy computing!
THE ANALOG COMPENDIUM

by Dick Johnson

The disk version of the ANALOG Compendium (3 double sided disks) will be available at our next club meeting on Feb 26th. To purchase the Compendium you must bring in the order card for the disk version from the back page of the Compendium as proof of purchase.

To keep costs down the Compendium will be available as follows:

All the BASIC programs on 2 double sided disks for \$9 or on 4 single sided disks for \$13.

All the Assembly listings will be on a double sided disk for \$4.

A cassette version of all BASIC programs which do not require disks will also be available for \$8. (ANALOG's price is \$35).

Those people who want the cassette or 4 disk versions please contact Dick Johnson at 521-0245 after 5:30 PM as only a limited number will be available at the club meeting.

The Compendium covers 52 different articles with 71 BASIC and 18 Assembly listings which appeared in the first 10 issues of ANALOG. Some of the programs have been revised and improved since their original appearance, and several of the programs have never before been published.

Copies of the Compendium are still available at Wizard Works for \$14.95 less your 10% club discount.

In keeping with the TAIG policy of adhering to copyright laws, no disks will be sold unless the disk order card is surrendered when purchasing the Compendium disks, so please be sure to bring your order card.

THE SORCERER'S APPRENTICE or WHY
DOESN'T THIS COMPUTER HAVE A BUTTON
MARKED "PANIC"?

By Kate Wolfe Jensen

Until recently, I was able to resist the pressure to enter the computer age. I was willing to sit with glazed eyes while my husband carried on whole conversations in what I call "compusion". I was willing to stand idly by while others developed pac-mania. I was willing to take my chances on the job market as a computer illiterate.

No longer.

What could have changed my mind? Peer pressure? Divine intervention?

It was trees. I suddenly realized how many trees I could save by using a word processor. I thought of the forests destroyed to further my education and decided the time had come to step boldly into the world of personal computing.

It hasn't been easy. For a long-time romantic like myself, it's difficult to deal with electronic toys. I get the feeling that inside that plastic casing, hiding in among the PC boards, is the computer's scheming little heart. It's out to get me.

If Ralph laughs at my imaginings, that's only because the computer is too smart for him. It does the dirty work only when I am home alone with it.

Muttering the magical incantation: "Power switch, disk in, cartridge down...", I begin the struggle.

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I spend the next hour taking my frustrations out on a good old typewriter. The trees will have to be patient with me.

CP/M ON THE ATARI

By Todd Burkey

As you probably saw at the last meeting, you really can run 8 inch drives on the ATARI. There is nothing like having 1.3 megabytes of disk space available per diskette (that is the same as about 16 ATARI 810 disks). Of course, you do need the ATR8000 to act as a controller for the drives, but then you have CP/M as well. What I forgot to mention at the last meeting was that the unit I had on display also had the new 8088 co-processor with 256K memory installed in it as well as the Z80 with 64K. The 8088 comes with MSDOS so you can run most of the MSDOS programs that run on the IBM PC, but it also comes with RAMDISK software that allows you to make the 8088's memory look like a 247K 8 inch drive from CP/M. So far, all of the CP/M software that I have tested (Wordstar, Perfect Writer/Speller, Multiplan, RIM, Nemesis, and the ZORKs to name a few) run with no problem on the memory drive and response is instantaneous, since there is no disk I/O delay. What is really nice is that the 8088 upgrade is now only \$450 (down by half from 6 months ago).

We will be ordering the Public Domain Software for CP/M from the National Distribution Center in the next month. It looks like we will be receiving 135 double sided 8 inch floppys to copy within one week. The current plan is to make one complete set of 8 inch duplicates and then copy these over to 5 1/4 inch diskettes. On-Line will be copying the 8 inch to 5 1/4 and supplying the disks for the 5 1/4 inch library, which they will keep in the back of the store for

"BOOT ERROR," It says smugly. I repeat the process. All goes smoothly until, in the middle of printing, it stops. I nod knowingly--we've had problems with this before. I leave to get a cup of tea. When I return it's still sitting there (snickering, no doubt). I go down to get the mail, read a short story, and tiptoe back into the office. Nothing.

It's time to get tough! Maybe, I reason, if I make it think I want to print something else, it will hurry to get finished with this job. I punch the print button again and the machine merrily takes off--from the beginning of the file.

Okay, back to editing. I zip down the page, admiring the professional way I handle the cursor. Ooops! Zipped too far. The computer produces a rude sounding "beep" and two rows of exclamation marks.

That's it. If this machine is going to be abusive, I'm going to switch it off. I'm still in control, after all!

First I have to take the disk out. Ralph's just gotten a slick new disk drive with a plastic cover that folds down. I can't get the cover to fold up. I fumble around the edges, pulling at seams with my fingernails and pressing in on the sides as though I'm looking for a secret panel. Nothing happens. I'm fed up and ready to phone for help. Ralph isn't in his office so I ask the secretary to leave a message. As I speak to her, I notice a little rectangle on the drive and I push it down. The plastic lid gracefully retracts. "Never mind that message ma'am."

us (it won't hurt their business either). I have purchased around 300 8 inch diskettes to cover the master library needs (thanks to Norman Kubokawa for getting 200 of them to me real cheap). Most of these disks are used, but they verify OK. The money for the 300 8 inch diskettes (\$395) and the ordering costs (around \$140) will hopefully be covered by a \$30.00 'donation' by each person that wants access to the library. If you are into CP/M or interested, I would recommend that you get your \$30.00 in before we start the copying process. I have a feeling that copying 30 to 40 megabytes of information and keeping track of it may be nerve wracking enough to make us consider raising the fee later on.

Next month I hope to have enough time to write up something on how MSDOS works on the ATR. Also, I will have CP/M 86 and MYDOS 3.16 (all the bugs are supposed to be fixed and directory structures supported on the ATARI?...we'll see) in by then. Possibly, I will also have MSBASIC by then, but a lot depends on how Kaypro decides to license the software. Kaypro has adopted the same 8088 upgrade kit built by SWP for the ATARI/ATR combo as their upgrade to the Kaypro computer (that is why prices have dropped on the upgrade and why some of the license costs are dropping).

A note to all of the CP/M people out there. I took a chance and ordered a dealer package of the Nevada software (BASIC, FORTRAN, Pilot, Edit, and COBOL). You really get a lot for your money (\$39.95 per package) both in terms of documentation and the completeness of the languages. Call me if you have any questions (542-1027). Also let me know if you want to come to our ATR meetings. We have had two so far and will level out to about 1 per month.

A SURELOAD TECHNIQUE FOR CARTRIDGE
BACKUP
BY TODD BURKEY

This note will very likely let a number of people in the ATARI user community breathe a collective sigh of relief. Now you don't have to spend all that time using MAC65 or SCANFIX+ to unprotect those heavily protected cartridges. If you are lazy or don't feel technically competent at unprotecting cartridges, this technique is for you. This note is aimed primarily at those of you who have 48K memory, a disk drive, and CARTDISK PLUS or a similar cartridge backup program. I would like to thank Steve Pauley and Mike Doleman for bringing sample cases of this technique to my attention (I had thought of doing it when I first wrote CARTDISK, but decided to let others experiment with their hardware.)

So what do you need to back up cartridges? First, you must install a set of switches using either of the methods presented in Figures 1 or 2. Figure 1 shows how to wire up a PC board that you can insert in your left cartridge slot whenever you want to load an unprotected cartridges' DOS file. I think this is the method used by those expensive cartridge copiers that are on the market today for \$45 to \$90 (CARTDISK PLUS was entirely software based and lets you edit protection out of a cartridge). Figure 2 is a cheaper and more convenient way to go. It shows how to wire up a simple 5 connection circuit directly to the motherboard of the ATARI and avoid the hassle of dealing with a special cartridge. Total cost is only \$5.00 or less for the hardware. The second thing you will need to use this backup technique is CARTDISK PLUS version 2.5. This version is a free disk swap to current owners of CARTDISK and \$25 new (plus \$1.00 shipping).

Once you have wired up your ATARI and have the correct version of CARTDISK, the procedure for backing up and running a cartridge is as follows:

- 1) Backup the cartridge to disk in the same manner as before.
- 2) Run the quick test option to see if the cartridge is protected.
- 3) Insert BASIC and reboot the disk. If the cartridge was not protected, use option 1 (CRTBLOAD) to generate a normal DOS file. If the cartridge was protected, use option 2 (SURELOAD) to generate a SURELOAD DOS file. Save these files to a normal DOS disk.
- 4) Remove BASIC, reboot the DOS disk, and perform a binary load (DOS option L) of the saved cartridge file. If the file was a SURELOAD file, it will tell you to set switch 2 to either 8 or 16K, and when the file is done loading, it will tell you to close switch 1 to disable the RAM. The cartridge will start automatically after you close switch 1.

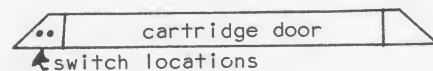
How does this work? Well, it is really quite simple. The circuit is connected to the 6502 R/W line so that whenever the 6502 performs a write to memory operation and switch 1 is closed, the ATARI sees only the cartridge slot in its circuit and not the upper 8 or 16K of RAM. When it does a read, everything is normal, so what effectively happens is that the RAM becomes read only (ROM) whenever the switch 1 is closed. In normal operation, you leave both switches open and your RAM works normally.

Notice that I have specifically not gone into details on how to install this circuit. If you know how to solder, then you can figure out how to implement either type of circuit. If you can't figure out how to build the circuit in Figure 2 then have a friend help you or contact me (Todd

at 612-542-1027). Several comments, I mounted the switches on the flat vertical area on my 800 just to the left of the cartridge door, facing the keyboard. I just stuck my soldering iron through the plastic, but you may choose to drill a hole. If you do it right, it will look pretty sharp. Also, to get the metal panel off of the bottom of your motherboard, just remove all of the screws and punch out the plastic centers of the clear plastic holders (there are four of them). Don't worry about replacing them in their sockets, they won't go anywhere anyway. I wrapped the 7404 in tape and just let it hang in the case of the ATARI, but if you plan on getting physical with your computer, you may want to mount it more solidly. Good Luck.

PARTS:

- 1--7404 (Radio Shack)
- 2--SPST switches (R.S.)
- 6--12" wires
- 1--2" wires
- 1--14 pin socket (optional)



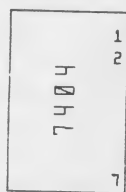
GETTING PHYSICAL WITH YOUR COMPUTER:



BACKSIDE

S1: RAM E/D

S2: 8/16K



CHIP SIDE

X81\8:S2

0\3 MAR

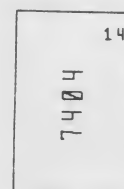


FIG. 1: Sureload on a Cartridge

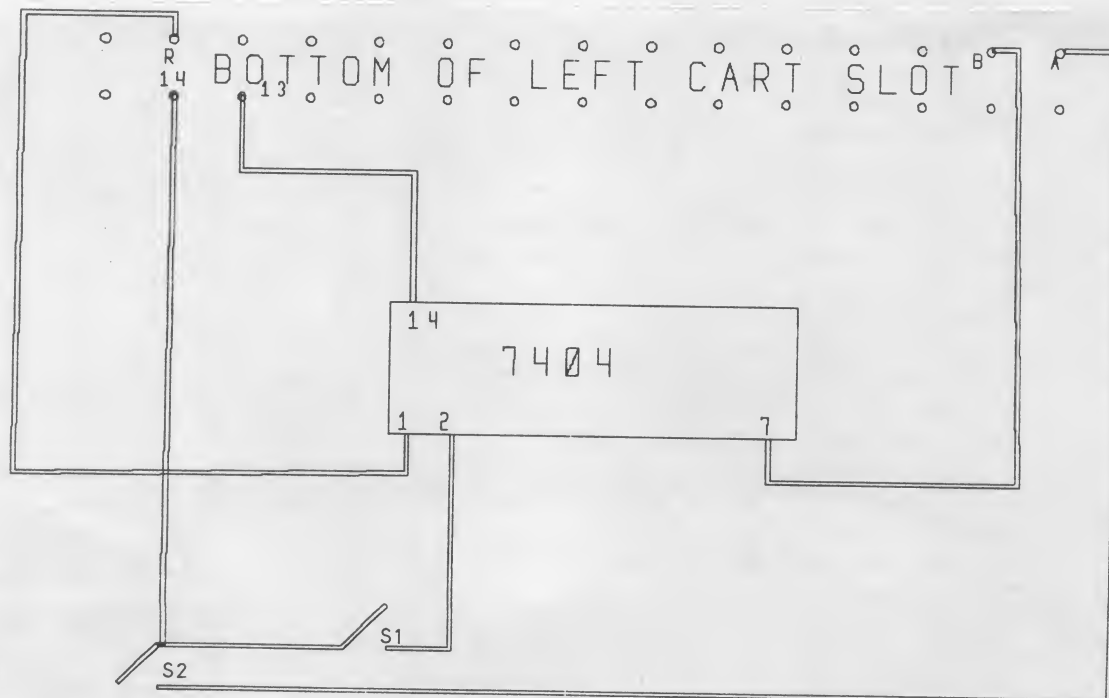


FIG. 2: Sureload inside the ATARI

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935-4397

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Donkey Kong Jr \$ 38.00 Joust \$ 39.00
Pole Position \$ 39.00 Ultima III \$ 42.00
Amdex Color I Monitor \$280.00
Gorilla Amber on Green Monitor \$110.00
INDUS Double density Drive \$349.00
Track AT/D2
Double Density w/printer port \$370.00
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TAIG
Tom & Ellen Moore, Membership Chairpersons
4648 31st Avenue S.
Minneapolis, MN 55406

3546 Pilgrim Lane
Plymouth, MN 55441



612-542-1027

SOFTBASE 1.1 and CARTDISK 2.5 for the 400/800.

Softbase is a fast and easy to use database for the ATARI. For only \$12.00 you get sorting, searching, and loading speed superior to the \$99 packages on the market today. Sort, search, and print by any field. Even mailing labels are supported. Cartdisk 2.5 is a cartridge to disk backup system that lets you edit cartridges and/or create DOS or boot files out of a cartridge. Version 2.5 supports the SURELOAD process, letting you back up even protected cartridges without any need to remove the protection.

CLEARANCE:

The following APX software is available until the stock is gone. Eastern Front, Letterman, Family Cash Flow II, Gallahad, and Quiz Master only \$8.00. Family Budget, Number Blast, Video Math Flashcards, 747 Landing Simulator, and Avalanche only \$6.00. Counter, Game Pack I, and Game Pack II only \$3.50 each! Thorn Submarine Commander only \$29 and Broderbund Sky Blazer only \$19.

Everyday:

Atari Writer only \$72 while supply lasts, Indus Drives are \$349, ATR8000 64K w/CPM is \$415, Flip Files are \$19, Koala Pads reduced to \$69, and diskettes are still \$18/box (Wabash) or \$17/10 (generic). Also, a special on the Archiver and the CHIP...only \$78 until May 1.



Next TAIG Meeting:
Sunday February 26, 1984
Interest Groups - 6:00 P.M.
TAIG - 7:00 P.M.

St. Louis Park Rec. Center
5005 West 36th Street
St. Louis Park, MN 55426